A significant amount of a DERA-derived product was found accumulating in the batch reactions using 400 mmol L\(^{-1}\) of 2b and 840 mmol L\(^{-1}\) of acetaldehyde. Two chromatographically separated isomers having identical mass spectra were observed in the GC-MS analysis (Figure S9). The mass spectra correspond to the lactol formed by aldol coupling of the single aldol intermediate 8b with additional molecule of 2b (2,6-chloro-2,4-dideoxyhexose, (4R,6S)-3-chloro-6-(chloromethyl)tetrahydro-2H-pyran-2,4-diol). The isotope distribution clearly shows the presence of two chlorine atoms in the compound (Figure S9P9). Comparison of the mass spectra for 3b and 19, shows characteristic fragments: [M - H\(_2\)O + H]\(^+\), [M - 2 H\(_2\)O + H]\(^+\) and [M - H\(_2\)O - HCl + H]\(^+\). We have not observed any single aldol condensation products having two chlorine atoms accumulating in the reactions, therefore we propose the origin of this molecule as the product of the DERA-catalyzed coupling of 8b with acetaldehyde as depicted in figure S8.

**Figure S8: Proposed reaction species in DERA condensation of 2b and 1.**
A highly productive, whole-cell DERA chemoenzymatic process for production of key lactonized side-chain intermediates in statin synthesis

Supporting information

Matej Ošlaj, a Jérôme Cluzeau, b Damir Orkić, b Gregor Kopitar, a Peter Mrak a* and Zdenko Časar a,c*

Supporting information S8

Figure S9 part 1: GC-MS spectra indicating the structure of 19.
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Supporting information

Matej Ošlaj, Jérôme Cluzeau, Damir Orkić, Gregor Kopitar, Peter Mrak* and Zdenko Časar*

Figure S9 part 2: GC-MS spectra indicating the structure of 19.